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**Background Document
For Proposed Amendments To**

310 CMR 50.00

Toxics Use Reduction

Regulatory Authority:
M.G.L. Chapter 21I, §§ 3, 10, 11, and 12

January 12, 2007

I. INTRODUCTION

The Massachusetts Department of Environmental Protection (MassDEP) is proposing to amend the Toxics Use Reduction regulations, 310 CMR 50.00, to implement statutory changes to the Toxics Use Reduction Act (“TURA,” MGL c. 21I) enacted in July 2006. The proposed regulatory revisions are the first of two sets of revisions and will implement new reporting provisions that affect calendar year 2006 toxics use reports due July 1, 2007. Later in 2007, MassDEP will propose a second set of regulatory revisions to implement new planning options that affect toxics use reduction plans due July 1, 2008.

II. BACKGROUND

TURA was originally enacted in 1989. Considered a cutting edge measure at the time, TURA required certain facilities to report their use of toxic chemicals and examine ways to decrease their use of toxic chemicals and wastes generated, with the goal of protecting public health, the environment, and workers, while helping businesses to become more competitive.

TURA committed Massachusetts to reduce toxic byproducts (or wastes) by 50%, a goal that was met in 1998. The highly successful TURA program has helped Massachusetts businesses to reduce toxics use by 41% and toxic byproducts by 65%¹, reducing chemical transportation risks, workplace hazards, and toxics in products, while helping Massachusetts businesses remain competitive in a global marketplace increasingly aware of toxics issues.

While TURA’s primary goal was met several years ago, program stakeholders agreed that additional toxics use reduction opportunities existed and that the program should be updated and improved in light of the experience gained from TURA over its 15-year history. On July 28, 2006, “An Act Amending the Toxics Use Reduction Act” (Chapter 188 of the Acts of 2006) was signed into law, representing the first major overhaul of the statute since it was first enacted in 1989.

The 2006 TURA amendments build on the program’s success by focusing attention on reducing the use of higher hazard chemicals, encouraging businesses to increase environmental performance through resource conservation plans and environmental management systems, and streamlining reporting and planning requirements.

MassDEP is working with its TURA program partners - the Office of Technical Assistance and Technology (OTA) and the Toxics Use Reduction Institute (TURI) – to begin implementing the 2006 TURA amendments, including developing these proposed revisions.

III. DESCRIPTION OF THE PROPOSED AMENDMENTS

These proposed revisions make changes to reporting provisions that affect calendar year 2006 toxics use reports due July 1, 2007, and also add and/or revise definitions based on the 2006 statutory amendments. These revisions are described below.

¹ Measured using 2004 data normalized for changes in production reported by a core group of industries that have been subject to reporting since 1990.

A. Provision Aligning State and Federal Reporting

Both the original and revised TURA use the same reporting thresholds that are established by the federal Toxics Release Inventory (TRI) program (with the exception of TURA's new threshold for higher hazard substances). Under TURA and TRI, reporting thresholds for persistent, bioaccumulative, toxic (PBT) chemicals are set at 100 pounds, 10 pounds, or 0.1 gram, depending on the chemical. For non-PBT chemicals, thresholds are set at 25,000 pounds for a listed toxic manufactured or processed, and 10,000 pounds for a listed toxic otherwise used.

However, originally TURA contained a provision that if a facility met the 10,000 pound otherwise use threshold, then the facility would have to report on all listed toxics *manufactured* or *processed* down to 10,000 pounds. This meant that many facilities were reporting to MassDEP chemicals that were not reportable federally (i.e., chemicals manufactured or processed in amounts of 10,000 pounds to 24,999 pounds).

The 2006 statutory amendments eliminated this provision so that facilities no longer need to report non-PBT chemicals manufactured or processed in amounts less than 25,000 pounds, unless they are TURA higher hazard substances. The 10,000 pound "otherwise use" threshold was not changed and remains the same under both TURA and TRI.

The proposed amendments incorporate the statutory change by amending the definition of "covered toxic" in 310 CMR 50.10.

B. Differentiation of Chemicals Based on Degree of Hazard

Originally, TURA did not differentiate chemicals according to their level of hazard. The 2006 statutory amendments give the TURA Administrative Council² authority to designate a toxic substance as higher hazard or lower hazard, or leave the substance unclassified. For a higher hazard substance, the threshold for reporting is, by statute, 1,000 pounds. The designation of higher hazard substances with the 1,000 pound threshold is likely to bring additional facilities into the TURA program. At the same time, lower hazard substances will be designated, which will reduce facility filing fees, as the statute exempts lower hazard chemicals from per chemical fees.

With respect to PBTs (such as lead, mercury, and dioxin), the 2006 amendment automatically designates those chemicals as higher hazard substances. But this does not affect reporting because PBTs already have reporting thresholds lower than 1,000 pounds, as established by U.S. EPA and which apply under TURA.³

² Under TURA, the Administrative Council is composed of the following representatives (or their designees): Secretary of Environmental Affairs, Commissioner of Environmental Protection, Secretary of Economic Development, Commissioner of Public Health, Director of Labor and Workforce Development, and the Secretary of Public Safety.

³ To summarize, TURA and TRI reporting thresholds for all chemicals (including PBTs) are the same, except for TURA higher hazard substances, which have a reporting threshold of 1,000 pounds unless they are a PBT that has a lower threshold than 1,000 pounds. However, no higher hazard substances (beyond existing PBTs) have been designated by the TURA Administrative Council. Please note that while TURA and TRI have consistent reporting

The proposed amendments add new definitions in 310 CMR 50.10 for “higher hazard substance” and “lower hazard substance,” and lower the threshold for higher hazard substances in the definition of “threshold amounts” in 310 CMR 50.10⁴.

C. Exemption for Toxics Present in Fuel Oil

Beginning in reporting year 2000, several toxics were designated as PBTs (persistent, bio-accumulative and toxic chemicals) with reporting thresholds of 100 pounds, 10 pounds, or 0.1 gram, depending on the chemical. Since some PBTs are present in fuel oils, many facilities began reporting these chemicals due to their combustion of fuel oil.

The 2006 statutory amendments added an exemption to the definition of “toxic or hazardous substance” for toxics contained in fuel oils used for combustion, so that facilities no longer need to report this use except when the production of electricity, steam or heat is the primary business activity of a facility.

The proposed amendments add this exemption to the definition of “toxic or hazardous substance” in 310 CMR 50.10.

D. Reporting Progress at the Production-Unit Level

Under both the original and revised TURA, facilities must report facility-wide amounts of each covered toxic manufactured, processed or otherwise used above reporting thresholds. Facilities also must designate production units that consist of production process / product combinations and report amounts of chemical use associated with each production unit using defined ranges. The highest range in the original TURA was “greater than 10,000 pounds.”

The 2006 statutory amendments add the following ranges:

- >10,000 pounds ≤ 100,000 pounds
- > 100,000 pounds ≤ 500,000 pounds, and
- > 500,000 pounds

The proposed amendments incorporate the additional ranges in 310 CMR 50.33(3)(b).

Under the original TURA statute, facilities were required to report a byproduct reduction index (BRI) and an emission reduction index (ERI) at the production unit level that were designed to track toxics use progress from a base year, normalized for changes in production levels.

thresholds (with the exception of TURA higher hazard substances), there are differences in the lists of reportable toxics and the types of industry categories subject to reporting in each program.

⁴ These proposed amendments define “higher hazard substance” and “lower hazard substance”, but do not effectuate the designation of higher hazard and lower hazard substances and, therefore, do not affect costs associated with such designations.

The 2006 statutory amendments eliminate reporting of the BRI, ERI, and base year, as well as a matrix that provided information on toxics use reduction methods, and replaced these measures with a requirement to report a “qualitative or quantitative indication of significant change in toxics use and byproduct generation, compared with the previous reporting year, including toxics use reduction techniques employed.”

The proposed amendments eliminate the requirements to report the base year, BRI, ERI, and matrix in 310 CMR 50.32, 50.33, and 50.36, and replace these requirements with a requirement in 50.33 that facilities report for each production unit whether the use or byproduct of a toxic substance increased or decreased by 10% or more (defining “significant change” from the statute), in what process the change occurred, and the reason for the change, including any toxics use reduction techniques employed or other factors that resulted in the change in use or byproduct. Facilities also would report this information if they implemented toxics use reduction. Attachment 1 includes the toxics use report Form S, revised to show how facilities would report the data (changed elements are noted in grey shading.) Also included are new codes that facilities would use to report the reasons for changes in use or byproduct, such as toxics use reduction techniques, waste minimization, an increase in production, etc.

In addition, the proposed amendments more specifically list in 310 CMR 50.33 what information is reported in the Form S (these amendments do not add any new requirements but specify what is already reported in the Form S).

E. Deficient Toxics Use Reports

The 2006 statutory amendments deleted language regarding unintentionally deficient reports and requiring MassDEP to give a facility 90 days to correct an unintentionally deficient report.

The proposed amendments delete the corresponding language in 310 CMR 50.35. (This deletion will not affect MassDEP’s current practice of sending “exception reports” to facilities where MassDEP has questions about reported data.)

F. Other Amendments

The proposed amendments add and/or revise a number of definitions based on the 2006 statutory amendments by incorporating verbatim the statutory definition.

New or revised definitions include “board” (Science Advisory Board), “byproduct,” “environmental management system,” “institute” (Toxics Use Reduction Institute), “NAICS” (the North American Industry Classification System adopted by the United States Office of Management and Budget as a replacement for the Standard Industrial Classification code system), “office” (Office of Technical Assistance and Technology), “resource conservation,” and “TURA.” Please note that requirements for EMSs and resource conservation plans will be addressed in the forthcoming second phase of TURA regulation amendments.

IV. Impacts of Proposed Revisions

A. Economic Impacts

The proposed revisions exempt from TURA reporting and planning requirements toxics in fuel oil used in combustion, which will result in many facilities not needing to file information on or develop plans for these toxics, thereby reducing paperwork and costs. The proposed revisions also provide that facilities no longer need to report toxics manufactured or processed in amounts greater than 10,000 pounds but less than 25,000 pounds (except for PBT chemicals and higher hazard substances), which will further reduce paperwork and costs.

The proposed amendments eliminate the calculation and reporting of BRIs and ERIs for each production unit as a measure of toxics use reduction progress, but replace it with the requirement to report significant increases and decreases in use and byproduct, identify where in the process changes occurred, and explain why changes occurred. MassDEP believes a similar level of effort will be required in reporting the new progress metrics, but with an increase in the usefulness of the data. The proposed amendments also eliminate the need to report certain data elements that were not used by the program, thereby streamlining the reporting and planning forms.

The TURA Administrative Council has the responsibility to designate higher hazard and lower hazard substances and to amend the Toxic or Hazardous Substance List, 301 CMR 41.00, in order for the lower 1,000 reporting threshold (for higher hazard) and the per chemical fee exemption (for lower hazard) to be effective. Any designation by the Administrative Council that amends 301 CMR 41.00 will go through the c. 30A public hearing process. At that time, the designation of higher hazard substances with a lower 1,000 pound threshold is likely to bring additional facilities into the TURA program that will incur new compliance costs associated with TURA reporting and planning. At the same time, lower hazard substances will be designated, which will reduce facility filing fees, as the statute exempts lower hazard chemicals from per chemical fees. These proposed amendments define “higher hazard substance” and “lower hazard substance”, but do not effectuate the designation of higher hazard and lower hazard substances and, therefore, do not affect costs associated with such designations.

B. Agricultural Impacts

Pursuant to MGL c. 30A, Section 18, State agencies must evaluate the impact of proposed programs on agricultural resources within the Commonwealth. The proposed revisions are intended to further reduce the use and release of toxic substances into the environment. Many of the toxic emissions that often are addressed in toxics use reduction plans are volatile organic compounds (VOCs) that contribute to the formation of ground-level ozone, which adversely affects vegetation and crops. Therefore, this proposal is likely to have a positive impact on agricultural production to the extent that VOCs are reduced through toxics use reduction.

C. Impacts on Municipalities

Pursuant to Executive Order 145, State agencies must assess the fiscal impact of new regulations on the Commonwealth's municipalities. Municipalities are statutorily exempt from TURA and therefore the proposed amendments will have no direct effect on them. However, municipalities are likely to benefit from reduced pollution and associated risks to the extent the proposed amendments reduce the use of toxic substances in their jurisdictions.

D. MEPA

While the proposed regulations exempt certain reporting of chemicals (e.g., toxics in fuel oils, toxics manufactured/processed below 25,000 pounds), these exemptions mirror the 2006 statutory amendments and already are in effect. MEPA review is not intended for regulatory revisions that are consistent with statutory revisions recently passed by the Legislature and signed by the Governor. The MEPA process would be duplicative of the process the statutory amendments just went through. As such, the proposed regulatory revisions are not subject to MEPA under the "Regulations Governing the Preparation of Environmental Impact Reports," 301 CMR 11.00.

V. PUBLIC PARTICIPATION

As provided by state law, MassDEP gives notice and provides the opportunity to review the proposed revisions to 310 CMR 50.00 and the accompanying background document, at least 21 days prior to holding a public hearing. The hearing and public comment period will be held in accordance with the procedures of MGL Chapter 30A. A copy of the proposed revisions and this background document are available on the MassDEP web site at www.mass.gov/dep/toxics/laws/regulati.htm.



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Background Document: Attachment 1



Massachusetts Department of Environmental Protection
Bureau of Waste Prevention

DRAFT

Reporting Year

Facility Name

DEP Facility ID Number

Chemical Name

Toxics Use Report - Form S

Chemical Use Facility-Wide and by Production Units

Section 1: Facility-Wide Use of Listed Chemical

Important:

When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



a. MA DEP CAS #

b. Chemical Name (Dioxin ~~will be assumed to~~ should be in grams, decimal points may be used)

Facility-wide use of chemical identified in a. Enter the total amount (in POUNDS, except for dioxin) for each applicable category. **NOTE:** 'Generated as byproduct' (item f.) **generally means all waste containing the listed chemical before the waste is handled, transferred, treated, or recycled, or released.**

Please refer to the reporting instructions before completing this section.

c. Manufactured

d. Processed

e. Otherwise used

f. Generated as Byproduct

g. Shipped in or as product

Section 2: Materials Balance

When the amounts reported in c, d and e in Section 1 are added together, the sum will in many cases equal the sum of f and g. In other words, lines c,d and e will often form a "materials balance." If lines c,d and e are not in approximate balance, you may use this section to explain why. Indicate all the reasons that apply by entering the number of pounds on the appropriate line below (e.g., 4,000 Chemical was held in inventory).

a. Chemical was recycled on site

b. Chemical was consumed or transformed

c. Chemical was held in inventory

d. Chemical is a compound

e. Other (explain in Section 4.I below)

f. Did anything non-routine occur at your facility during the reporting year which affected the data reported? Yes ☐ No ☐ **If yes, you may explain in Section 4.I. below.**

Section 3: Chemicals Used in Waste Treatment Units

a. Is this chemical used to treat waste or control pollution? Yes ☐ No ☐

If no, please skip ahead to Section 4.

b. Please enter the amount of the chemical used to treat waste or control pollution:



Massachusetts Department of Environmental Protection
Bureau of Waste Prevention

DRAFT

Reporting Year _____

Facility Name _____

DEP Facility ID Number _____

Chemical Name _____

Toxics Use Report - Form S

Chemical Use Facility-Wide and by Production Units

c. Did the use of this chemical for waste treatment or pollution control increase or decrease by 10 percent or more compared with the previous reporting year? Yes ☐ No ☐ If yes, you may explain in Section 4.1 below.

Background Document: Attachment 1

Section 4: Toxics Use by Production Unit

a. Production Unit #	b. Quantity of Chemical Code: <input type="checkbox"/> 1. $\leq 5,000$ lbs. <input type="checkbox"/> 2. $> 5,000 \leq 10,000$ lbs. <input type="checkbox"/> 3. $> 10,000 \leq 100,000$ lbs. <input type="checkbox"/> 4. $> 100,000 \leq 500,000$ lbs. <input type="checkbox"/> 5. $> 500,000$ lbs.		
Use	c. Did the use of this chemical increase or decrease by 10 percent or more compared with the previous reporting year and/or did you implement toxics use reduction? Yes <input type="checkbox"/> No <input type="checkbox"/> If no, please skip ahead to g below.		
	Process Code(s) where most significant change occurred (up to 3 in descending order)	Increase or Decrease	Technique Code (s) (up to three per process code)
	d.1	2. <input type="checkbox"/>	3.
	e.1	2. <input type="checkbox"/>	3.
	f.1	2. <input type="checkbox"/>	3.
Byproduct	g. Was byproduct generated for this chemical less than 1 percent of use in this production unit? Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, please skip ahead to i.		
	h. Did the byproduct generated for this chemical increase or decrease by 10 percent or more compared with the previous reporting year and/or did you implement toxics use reduction? Yes <input type="checkbox"/> No <input type="checkbox"/> If no, please skip ahead to i.		
	Process Code(s) where most significant change occurred (up to 3 in descending order)	Increase or Decrease	Technique Code (s) (up to three per process code)
	i.1	2. <input type="checkbox"/>	3.
	j.1	2. <input type="checkbox"/>	3.
	k.1	2. <input type="checkbox"/>	3.
	i. You may add any comments or explanations regarding chemical use and/or byproduct generated in this production unit, chemical use in waste treatment (from Section 3), and non-routine occurrences at your facility (from Section 2): <div style="border: 1px solid black; height: 40px; margin-top: 5px;"></div>		
m. Are there more production units using this chemical? Yes <input type="checkbox"/> No <input type="checkbox"/> (for use only in eDEP online TURA reporting)			
n. Are there more chemicals to report? Yes <input type="checkbox"/> No <input type="checkbox"/> (for use only in eDEP online TURA reporting)			

Background Document: Attachment 1: DRAFT Technique Reporting Codes
For Use in Revised 2006 Form S, Section 4

Description of Technique	Technique Code
TUR Techniques	
Input substitution	10
Product reformulation	20
Production unit redesign	30
Production unit modernization	40
Improved operation and maintenance	50
Integral recycling/reuse	60
Waste Minimization	
Byproduct sold in commerce as product	63
Byproduct used in on-site waste treatment	64
Byproduct reused in manufacturing	65
Non-integral on-site recycling	66
Off-site recycling	67
Other Activity	
Production increased or decreased	69
Reporting threshold was lowered	70
Change in definition of byproduct otherwise used	71
Production/process step outsourced	72
Chemical replaced a more toxic chemical	73
Chemical required by customer or specification	74
Returned to using toxic chemical because safer alternative did not meet technical requirement	75
Returned to using toxic chemical because safer alternative did not meet customer preference	76
Byproduct increase because of cleanup, decommissioning or spill	77
Improved operation of waste treatment unit	78
Increase due to installation of	

pollution control device	79
Other	80